

PATENT SPECIFICATION

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(19)



(54) AN ELECTRIC CONTACT FOR FLAT CONDUCTOR CABLES

(71) We, PRESSAC LIMITED, a British Company of Harrington Mills, Leopold Street, Long Eaton, Nottinghamshire, do hereby declare the invention for which we pray that a Patent may be granted to us and the method by which it is to be performed to be particularly described in and by the following statement:—

This invention concerns an improved electric contact for use with flat connector cables of the kind comprising a plurality of very thin strips of electrically conductive material embedded in an insulating material in side by side spaced apart parallel relation and has for its object the provision of contacts which can, if required, be quickly and easily fitted to, or adjacent to, an end of a cable so as to engage one or more of said conductor strips and be engaged by registering contact members of a connector or the like for electrically connecting said cable to a similar second cable. Alternatively, contacts of this invention may be fitted to a flat connector cable so as to be electrically connected between the ends of conductor strips to enable tap connections to be made.

According to the present invention there is provided an electric contact for use with flat connector cables of the kind referred to, said contact being of substantially channel or 'U' cross section and having an unperforated web portion formed with a shallow dome forming a pad at one side of the cable for engagement by a connector contact through which a connection with an electric circuit can be made, the free outer edges of the flanges of the contact being formed with serrations or teeth capable both of penetrating the insulation of a flat conductor cable to which the contact is to be fitted and of biting into a conductor strip when said flanges are deformed and intumed against the other side of the cable during crimping of the contact to said

cable.

To enable the invention to be clearly understood a preferred embodiment thereof will now be described by way of example with reference to the drawings accompanying our Provisional Specification, wherein:—

Figure 1 is a perspective view of the contact of this invention prior to being crimped to a flat conductor cable.

Figure 2 is a perspective view drawn to a smaller scale showing the contacts fitted to a cable.

Figure 3 is a transverse section drawn to an enlarged scale and taken on the line III-III of Figure 2, and

Figure 4 is a cross section illustrating a modification.

Referring to said drawings, the electric contact, prior to being fitted to a cable, is of substantially channel or 'U' shape in cross section as clearly shown in Figure 1 and comprises an unperforated web portion 1 formed with a shallow dome 2 forming a pad for engagement by a connector contact through which a connection with an electric circuit can be made.

The free outer edges of the flanges 3 of the contact are formed with serrations or teeth 4 capable both of penetrating the insulation 5 (Figure 3) of a flat conductor cable to which the contact is to be fitted and of biting into a conductor strip 6 when said flanges 3 are deformed and intumed against the other side of the cable during crimping of the contact to the cable, the final shape of the contact being that shown in Figure 3.

Cables of the kind referred to and fitted with contacts constructed in accordance with this invention, may with advantage be used in connection with connectors constructed in accordance with our companion co-opening Application No; 42141/70 (Serial No. 1 353 025).

A connector according to our said co-pending Application briefly comprises the plurality of pairs of contacts and one contact of each pair is adapted to engage electrically the domed part 2 of a contact and the parts of the flanges 3 at the other side of the cable constitute abutments which co-acts with the ledge or stop of the other of said pairs of contacts so as to prevent displacement of the cable lengthways and consequent separation of the cable from the connector. The contact of this invention may of course be used with other circuit arrangements and not necessarily that described in our said co-pending Application No. 42141/70 (Serial No. 1 353 025).

According to the modification illustrated by Figure 4, the distance between the flanges 3 is the same as the width of a contact strip 6 of a cable with which the contact is intended to be used so that when the flanges 3 are deformed and intumed they are made to engage with the longitudinal side edges of a conductor strip 6 as indicated at 3a to supplement the electrical connection made by the serrations 4 biting into said strip thereby ensuring that an adequate electrical connection is achieved.

A tap connection can be made between the ends of a conductor strip 6 by engaging a bared end or tag of a tap lead beneath the shallow dome 2 of a pad as 35 indicated at 7 in Figure 2.

WHAT WE CLAIM IS:

1. An electric contact for use with flat connector cables of the kind referred to,

said contact being substantially channel or 'U' cross section and having an unperforated web portion formed with a shallow dome forming a pad at one side of the cable for engagement by a connector contact through which a connection with an electric circuit can be made, the free outer edges of the flanges of the contact being formed with serrations or teeth capable both of penetrating the insulation of a flat conductor cable to which the contact is to be fitted and of biting into a conductor strip when said flanges are deformed and intumed against the other side of the cable during crimping of the contact to said cable.

2. An electric contact for use with flat connector cables of the kind referred to, constructed substantially as hereinbefore described with reference to and as illustrated by the drawings accompanying our Provisional Specification.

3. A flat connector cable of the kind referred to fitted with an electric contact as claimed in any of the preceding Claims.

4. A flat connector cable as claimed in Claim 3, wherein the distance between the flanges of the contact is the same as the width of a contact strip of the cable so that when said flanges are deformed and intumed they are caused to engage with the longitudinal side edges of a conductor strip to supplement the electrical connection made by said serrations biting into the strip.

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PROVISIONAL SPECIFICATION

1 SHEET

*This drawing is a reproduction of
the Original on a reduced scale*

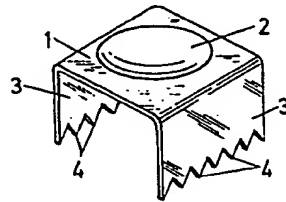


FIG. 1.

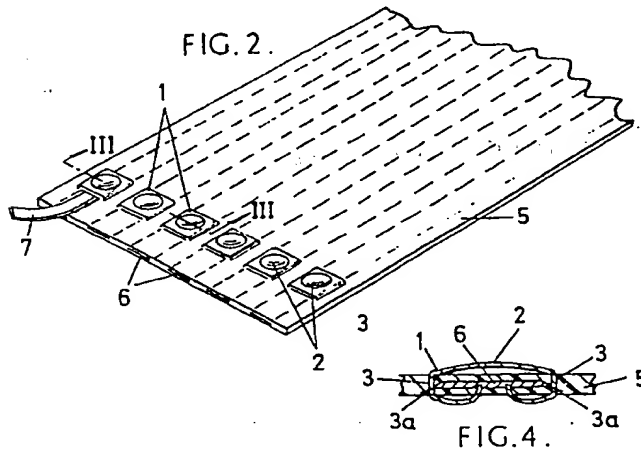


FIG. 4.

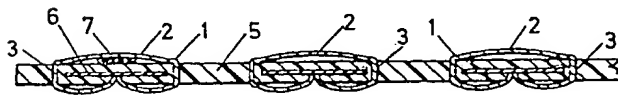


FIG. 3.

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